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Support for apparatus in general and, in particular, for optical or photographic apparatus and the like.

Technical field

The subject of the present invention is a support for apparatus in general
5 and, in particular, for optical or photographic apparatus and the like, of the type
described in the preamble to the main claim.

Technological background

Supports including the above-mentioned characteristics are used widely in
the photographic and cinematographic fields, generally in association with tripods
10 or stands for the orientable support of cameras. In this field, a need arises to
position the stand or tripod with a pillar support mounted thereon and to be able
to orient the apparatus mounted on the support about its own axis. This need
arises typically in so-called panoramic shots.

In this situation, it is necessary to position the tripod with care so that the
15 rotation of the pillar takes place whilst the desired state of levelness of the
camera is maintained.

Cinematographic tripods and stands are also known, in which, to avoid the
need for levelness, supports are used which have orientable platforms on which
the head that supports the optical or photographic apparatus is mounted in turn.
20 However, these supports require rack drives which interfere with the freedom of
positioning of the pillar. Moreover, they are wholly unsuitable for applications in
which the pillar can be moved to two or more positions on the tripod.

Description of the invention

The main aim of the invention is to provide a support which can be
25 mounted on tripods of conventional design and which at the same time affords all

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CLAIMS

1. A support for apparatus in general and, in particular, for optical or photographic apparatus and the like, comprising a pillar (12) arranged to receive the apparatus at a first end and to be housed with its stem (11) in a seat (4) extending through a spider (3) of a tripod (4), characterized in that the support comprises, at the first end, an orientable platform (14) for the levelling of the apparatus independently of the positioning of the tripod (1), and in that the pillar (12) is structurally independent of the spider (3) and can be inserted removably in the seat (4).
2. A support according to Claim 1 in which the orientable platform (14) comprises a first ball and socket joint including a ball (16) and a socket (15) fixed firmly to a fixing plate (17) of the platform and to the stem (11) of the pillar, respectively, or vice versa, and a tie rod (23) acting between the socket (15) and the ball (16) in order, when tensioned, to prevent relative rotation thereof.
3. A support according to Claim 2 in which spirit-level means (22) are associated with the plate (17).
4. A support according to Claim 2 or Claim 3 in which fixing means (20) for a head (T) for the orientable support of the apparatus are associated with the plate (17).
5. A support according to one or more of the preceding claims in which the fixing means comprise at least one screw coupling which can clamp the head (T) or apparatus against the fixing plate (17) and at least one grub screw (21) which can preload the screw coupling between the plate (17) and the head (T) or apparatus.
6. A support according to one or more of the preceding claims in which the

tie rod (23) extends through the stem (11) of the pillar and is operated by means of a knob (29) associated with a second end of the pillar (12), remote from the first end.

7. A support according to one or more of the preceding claims in which a
5 knob (29) is screwed onto the tie rod (23) by operative actuation of the knob (29).

8. A support according to one or more of the preceding claims in which the knob (29) is associated removably with the tie rod (23) in order to be removed for the purpose of the removal of the pillar (12) from the seat in the spider (3) and its insertion therein.

10 9. A support according to one or more of the preceding claims in which a small plate (34), removable with the knob (29), is interposed between the knob (29) and the pillar (12) and can project radially from the pillar (12) in order to prevent the pillar from accidentally slipping out of the seat.

10. A support according to Claim 9 in which the small plate (34) is fixed firmly
15 to the female thread (28) of the knob.

11. A support according to one or more of the preceding claims in which preloading means are provided on the tie rod for ensuring a friction load in the first ball and socket joint when the tie rod is slackened.

12. A tripod including a support according to one or more of the preceding
20 claims in which the pillar (12) is slidable in the seat (4), locking means being provided between the spider (3) and the pillar (12) for locking the pillar (12) in the seat (4), in an adjustable position along the stem (11).

13. A tripod according to Claim 12 in which the locking means comprise a brake (35) mounted in the spider (3).

14. A tripod according to Claim 12 or Claim 13 in which the shape of the stem (11) of the pillar (12) and of the seat (4) in the spider (3) is such as to provide a non-rotatable guided coupling of the pillar in the spider.